

SUPPORT FOR THE AMENDMENT

This Amendment amends the specification; adds an abstract; amends Claims 1 and 7-11; and adds new Claims 12-13. Support for the amendments is found in the specification and claims as originally filed. The specification is amended to correct typographical errors. Support for Claim 1 is found in the specification at least at page 9, lines 3-6. Support for new Claim 12 is found in the specification at least at page 9, lines 10-11. Support for new Claim 13 is found in the specification at least at page 6, lines 20-28. No new matter would be introduced by entry of these amendments.

Upon entry of these amendments, Claims 1-13 will be pending in this application.

Claim 1 is independent.

REMARKS

The present invention provides a polyvinyl alcohol polymer (PVA) film that has a small number of defects and is useful as a raw material for producing a polarization film. In the PVA film of the present invention, the amount of PVA eluted when a 10 cm² of the PVA film is left in one liter of water at 50°C for four hours is from 1 to 100 ppm.

It is important for the PVA film of the present invention that the amount of PVA eluted when a 10 cm square PVA film is left in 1 liter of water of 50°C for 4 hours is from 1 to 100 ppm. Preferably, this elution amount is from 5 to 80 ppm, and particularly, most preferably from 10 to 60 ppm. When the elution amount of PVA is over 100 ppm, the elution amount of PVA into a vessel increases and the amount of PVA deposited on a PVA film and a polarization film increases, obtaining a polarization film having a smaller number of defects becomes difficult, and problems occur in waste water treatment. For realizing an elution amount of PVA of less than 1 ppm, an extremely large amount of preliminary washing water is necessary expensively, and in addition, high degree of heat treatment after film formation and drying is necessary, leading to deterioration in monoaxial stretching property, and resultantly, an excellent polarization film is not obtained easily. Specification at page 10, line 18 to page 11, line 2.

In producing the inventive PVA films having the recited elution amount, it is important to wash, with water having a temperature in a range of from 10 to 90°C, PVA in the form of tips before preparing a PVA solution for film formation, to preliminarily remove PVA which tends to be eluted. The bath ratio by weight of water to PVA tips is preferably at least 1. See, specification at page 6, line 20 to page 7, line 14.

Examples 1 to 4 describe PVA films having an elution amount of 1 to 100 ppm and methods of producing polarization films from such PVA films, while Comparative Examples 1 to 4 describe PVA films having an elution amount outside of the 1 to 100 ppm range. The inventive examples exhibit fewer defects than the Comparative Examples. For example, although the PVA film of Comparative Example 1 was treated in the same manner as in Example 1, the film of Comparative Example 1, with 200 ppm of eluted PVA, exhibited defects while the film of inventive Example 1, with 50 ppm of eluted PVA, did not. In addition, although the PVA film of Comparative Example 3 was treated in the same manner as in Example 2, the film of Comparative Example 3, with 150 ppm of eluted PVA, exhibited defects, while the film of inventive Example 2, with 40 ppm eluted PVA, did not.

In the parent application, Claims 1-11 were rejected under 35 U.S.C. § 102(b) or, in the alternative, under 35 U.S.C. § 103(a) over JP 10-325907 ("Akira"). Akira discloses a PVA-base phase difference film formed from polyvinyl alcohol resin dissolved in water or an organic solvent.

However, Akira fails to suggest the independent Claim 1 limitation of a plasticizer selected from the group consisting of ethylene glycol, glycerine, propylene glycol, diethylene glycol, diglycerin, triethylene glycol, tetraethylene glycol, and trimethylolpropane. The plasticizer improves the stretching property of the polyvinyl alcohol polymer film (see, e.g., specification at page 9, line 9). Furthermore, Akira fails to suggest the significant reduction

in defects achieved according to the present invention by controlling the amount of polyvinyl alcohol polymer eluted to a range of from 1 to 100 ppm. Thus Akira fails to anticipate or to have rendered obvious the claimed invention.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the application is in condition for allowance. Applicants respectfully request favorable consideration and prompt allowance of the application.

Should the Examiner believe that anything further is necessary in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

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